

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device comprising:

forming a metal layer over a substrate;

forming an oxide layer contacting with the metal layer;

forming an insulating film contacting with the oxide layer;

forming a semiconductor film having an amorphous structure over the insulating film, wherein the semiconductor film comprises hydrogen;

performing heat treatment for diffusing the hydrogen;

adhering a support member to a layer to be peeled, wherein the layer comprises the insulating film and the semiconductor film; and

peeling the layer to be peeled from the metal layer formed over the substrate ~~by means of physical means~~ after adhering the support member.

2. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device comprising:

forming a metal layer over a substrate;

forming an oxide layer contacting with the metal layer;

forming an insulating film contacting with the oxide layer;

forming a semiconductor film having an amorphous structure over the insulating film, wherein the semiconductor film comprises hydrogen;

performing heat treatment for diffusing the hydrogen;

forming a thin film transistor comprising the semiconductor film as an active layer and an element connected with the thin film transistor;

adhering a support member to a layer to be peeled, wherein the layer comprises the insulating film, the thin film transistor and the element connected with the thin film transistor; and

peeling the layer to be peeled from the metal layer formed over the substrate by means of physical means after adhering the support member.

3. (Withdrawn) A peeling method comprising:

forming a first metal layer over a substrate;

forming an oxide layer contacting with the first metal layer;

forming an insulating film contacting with the oxide layer;

forming a second metal layer including hydrogen on the insulating film;

performing heat treatment for diffusing hydrogen;

forming a thin film transistor and an element connected with the thin film transistor; and

adhering a support member to a layer to be peeled including the oxide layer, the insulating film, the thin film transistor and the element; and

peeling the layer to be peeled adhered to the support member from the first metal layer formed over the substrate by means of physical means.

4. (Currently Amended) A peeling method A method of manufacturing a semiconductor device comprising:

forming a metal layer including hydrogen over a substrate;

forming an oxide layer contacting with the metal layer;

forming an insulating film in contact with the oxide layer;

forming a semiconductor film having an amorphous structure over the insulating film;

performing heat treatment for diffusing the hydrogen;

forming a thin film transistor including the semiconductor film as an active layer and an element connected with the thin film transistor; and

adhering a support member to a layer to be peeled, wherein the layer comprises the insulating film, the thin film transistor and the element; and

peeling the layer to be peeled from the metal layer formed over the substrate ~~by means of physical means~~ after adhering the support member.

5. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 1, wherein the heat treatment is performed at a temperature equal to or higher than a temperature at which the hydrogen in the semiconductor film is emitted or diffused.

6. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 2, wherein the heat treatment is performed at a temperature equal to or higher than a temperature at which the hydrogen in the semiconductor film is emitted or diffused.

7. (Withdrawn) A peeling method according to claim 3, wherein the heat treatment is performed at a temperature equal to or higher than a temperature at which hydrogen in a film is emitted or diffused.

8. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 4, wherein the heat treatment is performed at a temperature equal to or higher than a temperature at which the hydrogen in the metal layer is emitted or diffused.

9. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 1, wherein the metal layer is a single layer

comprised of an element selected from the group consisting of W, Ti, Ta, Mo, Cr, Nd, Fe, Ni, Co, Zr, Zn, Ru, Rh, Pd, Os, Ir, and Pt or an alloy material or compound material that contains the element as its main constituent, or is a lamination layer comprised of the metals or mixtures thereof.

10. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 2, wherein the metal layer is a single layer comprised of an element selected from the group consisting of W, Ti, Ta, Mo, Cr, Nd, Fe, Ni, Co, Zr, Zn, Ru, Rh, Pd, Os, Ir, and Pt or an alloy material or compound material that contains the element as its main constituent, or is a lamination layer comprised of the metals or mixtures thereof.

11. (Withdrawn) A peeling method according to claim 3, wherein the metal layer is a single layer comprised of an element selected from the group consisting of W, Ti, Ta, Mo, Cr, Nd, Fe, Ni, Co, Zr, Zn, Ru, Rh, Pd, Os, Ir, and Pt or an alloy material or compound material that contains the element as its main constituent, or is a lamination layer comprised of the metals or mixtures thereof.

12. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 4, wherein the metal layer is a single layer comprised of an element selected from the group consisting of W, Ti, Ta, Mo, Cr, Nd, Fe, Ni, Co, Zr, Zn, Ru, Rh, Pd, Os, Ir, and Pt or an alloy material or compound material that contains the element as its main constituent, or is a lamination layer comprised of the metals or mixtures thereof.

13. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 1, wherein the oxide layer is a silicon oxide film formed by sputtering.

14. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 2, wherein the oxide layer is a silicon oxide film formed by sputtering.

15. (Withdrawn) A peeling method according to claim 3, wherein the oxide layer is a silicon oxide film formed by sputtering.

16. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 4, wherein the oxide layer is a silicon oxide film formed by sputtering.

17. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 1, wherein the insulating film is at least one selected from the group consisting of a silicon oxide film, a silicon oxynitride film, and a lamination layer of the films.

18. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 2, wherein the insulating film is a silicon oxide film, a silicon oxynitride film, or a lamination layer of the films.

19. (Withdrawn) A peeling method according to claim 3, wherein the insulating film is a silicon oxide film, a silicon oxynitride film, or a lamination layer of the films.

20. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 4, wherein the insulating film is at least one selected from the group consisting of a silicon oxide film, a silicon oxynitride film, and a lamination layer of the films.

21. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 1, wherein a thickness of the oxide layer is thicker than a film thickness of the metal layer.

22. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 2, wherein a thickness of the oxide layer is thicker than a film thickness of the metal layer.

23. (Withdrawn) A peeling method according to claim 3, wherein a thickness of the oxide layer is thicker than a film thickness of the metal layer.

24. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 4, wherein a thickness of the oxide layer is thicker than a film thickness of the metal layer.

25. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 2, wherein an element provided on the insulating film is at least one selected from the group consisting of a light emitting element, a semiconductor element, and a liquid crystal element.

26. (Withdrawn) A peeling method according to claim 3, wherein an element provided on the insulating film is a light emitting element, a semiconductor element, or a liquid crystal element.

27. (Currently Amended) ~~A peeling method~~ A method of manufacturing a semiconductor device according to claim 4, wherein an element provided on the

insulating film is at least one selected from the group consisting of a light emitting element, a semiconductor element, and a liquid crystal element.

28. (New) A method of manufacturing a semiconductor device comprising:
 - forming a metal layer over a substrate;
 - forming an oxide layer on the metal layer;
 - forming an insulating layer on the oxide layer by plasma CVD;
 - forming a semiconductor film comprising amorphous silicon and hydrogen over the insulating layer;
 - crystallizing the semiconductor film;
 - patterning the crystallized semiconductor film to form at least one island-like semiconductor layer;
 - forming at least one thin film transistor using the at least one semiconductor layer for a channel forming region thereof; and
 - separating the substrate from the at least one thin film transistor.

29. (New) A method of manufacturing a semiconductor device according to claim 28, wherein the metal layer comprises a metal selected from the group consisting of W, Ti, Ta, Mo, Cr, Nd, Fe, Ni, Co, Zr, Zn, Ru, Rh, Pd, Os, Ir, and Pt.

30. (New) A method of manufacturing a semiconductor device according to claim 28, wherein the metal layer comprises tungsten.

31. (New) A method of manufacturing a semiconductor device according to claim 28, wherein the oxide layer comprises a material selected from the group consisting of silicon oxide, silicon nitride oxide and a metal oxide.

32. (New) A method of manufacturing a semiconductor device according to claim 28, wherein the oxide layer is formed by sputtering.

33. (New) A method of manufacturing a semiconductor device according to claim 28, wherein a surface of the metal layer is oxidized during the formation of the oxide layer.

34. (New) A method of manufacturing a semiconductor device comprising:
forming a metal layer over a substrate;
forming an oxide layer on the metal layer;
forming a layer containing hydrogen over the oxide layer;
heating the layer containing hydrogen to emit hydrogen therefrom; and
separating the substrate from the layer containing hydrogen after the heating.

35. (New) A method of manufacturing a semiconductor device according to claim 34, wherein the heating of the layer containing hydrogen is performed at a temperature of 410°C or higher.

36. (New) A method of manufacturing a semiconductor device according to claim 34, wherein the metal layer comprises a metal selected from the group consisting of W, Ti, Ta, Mo, Cr, Nd, Fe, Ni, Co, Zr, Zn, Ru, Rh, Pd, Os, Ir, and Pt.

37. (New) A method of manufacturing a semiconductor device according to claim 34, wherein the metal layer comprises tungsten.

38. (New) A method of manufacturing a semiconductor device according to claim 34, wherein the oxide layer comprises a material selected from the group consisting of silicon oxide, silicon nitride oxide and a metal oxide.

39. (New) A method of manufacturing a semiconductor device according to claim 34, wherein the oxide layer is formed by sputtering.

40. (New) A method of manufacturing a semiconductor device according to claim 34, wherein a surface of the metal layer is oxidized during the formation of the oxide layer.

41. (New) A method of manufacturing a semiconductor device according to claim 34, wherein the layer containing hydrogen comprises silicon nitride.

42. (New) A method of manufacturing a semiconductor device according to claim 1, wherein the peeling of the layer to be peeled is performed by physical means.

43. (New) A method of manufacturing a semiconductor device according to claim 2, wherein the peeling of the layer to be peeled is performed by physical means.

44. (New) A method of manufacturing a semiconductor device according to claim 4, wherein the peeling of the layer to be peeled is performed by physical means.